

# LEM Model LA 25-NP

## Definition

The LEM Model LA 25-NP is a multi-range current transducer for the electronic measurement of currents (DC, AC and pulsed) with galvanic isolation between the primary (measured) and the analog output (control) signal.

## Electrical Data

Nominal Current $I_N$	: 25 At rms
Measuring Range	: 0 to $\pm 36$ At
Measuring Resistance	: $R_M$ min. $R_M$ max.
with $\pm 15$ V at $\pm 25$ A max	: 100 Ohms 320 Ohms
at $\pm 36$ A max	: 100 Ohms 190 Ohms
Nominal Analog Output Current	: 25 mA
Turns Ratio	: 1-2-3-4-5 : 1000
Overall Accuracy at $+25^\circ\text{C}$	: $\pm 0.6\%$ of $I_N$
Supply Voltage	: + and - 15 V ( $\pm 5\%$ )
Isolation	: 2.5kV rms/50Hz/1 min

## Accuracy - Dynamic Performance

	Typical	Maximum
Zero Offset Current at $+25^\circ\text{C}$	: $\pm 0.02$ mA	$\pm 0.05$ mA
Residual current after overload of $3 \times I_N^*$	: $\pm 0.05$ mA	$\pm 0.15$ mA
Thermal Drift of Offset Current	:	
(between $0^\circ\text{C}$ and $+25^\circ\text{C}$ )	: $\pm 0.06$ mA	$\pm 0.25$ mA
(between $+25^\circ\text{C}$ and $+70^\circ\text{C}$ )	: $\pm 0.1$ mA	$\pm 0.35$ mA
Linearity	: better than 0.2%	
Response Time	: better than 1 $\mu\text{s}$	
Bandwidth	: 0 to 150 kHz (-1dB)	

## General Data

Operating Temperature	: $0^\circ\text{C}$ to $+70^\circ\text{C}$
Storage Temperature	: $-25^\circ\text{C}$ to $+85^\circ\text{C}$
Current Consumption	: 10 mA + output current
Secondary Internal Resistance	: 110 ohms (at $+70^\circ\text{C}$ )
Primary Internal Resistance	: $< 1.25$ mohm/turn
Isolation Resistance	: $> 1500$ Mohm (at 500V and $+25^\circ\text{C}$ )
Weight	: 22 grams
Fastening	: potted in insulated self-extinguishing plastic case
Polarity	: A positive measuring current is obtained on the output when the primary current flows from terminals 1,2,3,4 and 5 to terminals 10, 9, 8, 7 and 6

- Notes
- This is a standard model: for different versions (e.g. supply voltage, turns ratio, mechanical dimensions, unidirectional measurement, etc.) please contact us.
  - \* Result of the coercive field of the magnetic circuit

Patent Pending

920716/2

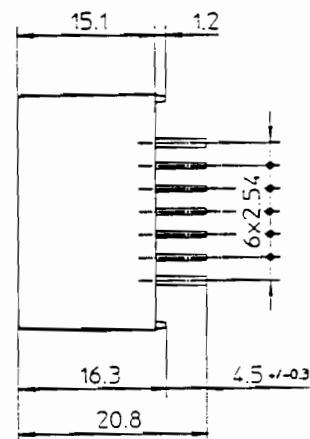
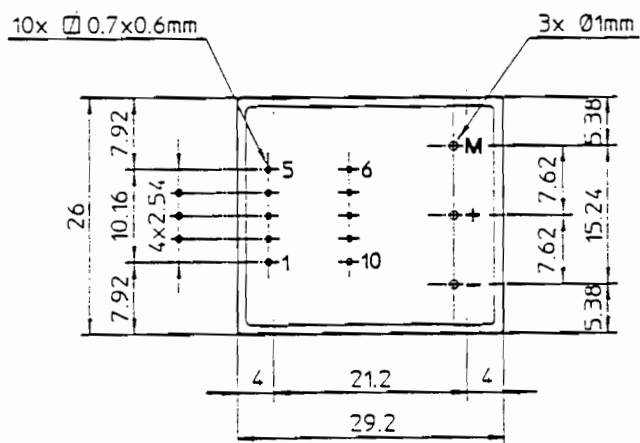
6643 West Mill Road Milwaukee, WI 53218  
Phone: 414-353-0711 Fax: 414-353-0733

**LEM** U.S.A., INC.  
PIONEERING POWER ELECTRONICS

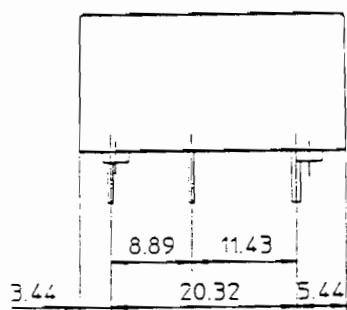
LETA

a member of LEM HOLDING S.A.

Number of primary turns	Primary current		Nominal output current $I_s$ [mA]	Turn ratio	Primary resistance [mOhm]	Primary insertion inductance ( $\mu$ H)	Recommended connections
	nominal $I_p$ [A]	maximum $I_p$ [A]					
1	25	36	25	1/1000	0.3	0.023	
2	12	18	24	2/1000	1.1	0.09	
3	8	12	24	3/1000	2.5	0.21	
4	6	9	24	4/1000	4.4	0.37	
5	5	7	25	5/1000	6.3	0.58	



Recommended PCB hole diam. :  $\varnothing$  1.2 mm



### Connection

